REMARKS

Claims 1, 11-13, 15-22, 24, and 27-31 are pending. Claims 27 and 29 have been cancelled without prejudice to or disclaimer of the underlying subject matter. New claims 32-39 have been added. Support for the foregoing amendment can be found throughout the specification and claims as originally filed, for example on page 23, line 12 through page 26, line 20, and page 93, line 5 through page 100, line 19. No new matter enters by way of these amendments. Upon entry of the foregoing amendment, claims 1, 11-13, 15-22, 24, 28, and 30-39 will be pending.

I. Objections to the Claims

Claims 27 and 29 have been objected to under 37 C.F.R. § 1.75(c) as being "of improper dependent form for failing to further limit the subject matter of a previous claim." Office Action at page 2. The Examiner alleges that "[c]laims 27 and 29 depend, respectively, from claims 26 and 10, which are cancelled." *Id.* Applicants note that to facilitate prosecution, claims 27 and 29 have been cancelled without prejudice to or disclaimer of the underlying subject matter. As such, the objections to claims 27 and 29 are moot and Applicants respectfully request reconsideration and withdrawal of the objections.

II. Rejection under 35 U.S.C. §101

Claims 1, 11-13, 15-22, 24, and 27-31 stand rejected under 35 U.S.C. § 101 because the claimed invention allegedly is not supported by either a specific, substantial, and credible utility

or a well-established utility. Final Action at page 2. Applicants respectfully traverse this rejection as it applies to the amended claims.

The "basic quid pro quo contemplated by the Constitution and the Congress for granting a patent monopoly is the benefit derived by the public from an invention with substantial utility...where specific benefit exists in currently available form." *Brenner v. Manson*, 383 U.S. 519, 534-35, 148 U.S.P.Q. 689, 695 (1966). As previously stated, Applicants have met this part of the bargain – the present specification discloses nucleic acid molecules which, in their current form, provide at least one specific benefit to the public, for example, use to encode maize or soybean phosphogluconate pathway enzymes or fragments thereof. *See, e.g.* Specification at page 14, line 2 through page 15, line 2 and page 224, Table A. This benefit is specific, not vague or unknown, and it is a "real world" or substantial benefit.

The Federal Circuit has recently provided guidance as to the kind of disclosure an application could contain to establish a specific and substantial utility. *In re Fisher*, 421 F.3d 1365, 76 U.S.P.Q.2d 1225 (Fed. Cir, 2005). First, the Court indicated that the specification disclose "that an invention is useful to the public as disclosed in its current form." *Id.* at 1371. Second, the Court further noted that the specification "also show that that claimed invention can be used to provide a well-defined and particular benefit." *Id.* Applicants have provided nucleic acid sequences which are shown in the specification to correlate to underlying genes of a known function, proteins involved in the phosphogluconate pathway. Such a correlation is sufficient to satisfy the utility standard. *Id.*

Applicants maintain that the present specification discloses specific and substantial uses for the claimed nucleic acid molecules, including use to encode recited maize or soybean

phosphogluconate pathway enzymes or fragments thereof (*see, e.g.,* specification at page 14, line 2 through page 15, line 2, page 222, line 8 through page 223, line 13 (Example 4), Table A and the sequence listing); use to identify polymorphisms related to the recited phosphogluconate pathway enzyme (*see, e.g.,* specification at page 67, line 3 through page 74, line 18); use to transform plants (*see, e.g.,* specification at page 92, line 1 through page 110, line 16); to determine the level or pattern of expression of a phosphogluconate pathway protein or mRNA associated with that nucleic acid molecule (*see, e.g.,* specification at page 80, line 6 through page 85, line 5); and use to overexpress or suppress the respective phosphogluconate pathway enzyme (*see, e.g.,* specification at page 110, line 12 through page 113, line 4).

The specification clearly sets forth that the nucleic acid molecules of the present invention correlate to underlying proteins that encode discrete phosphogluconate pathway enzymes or fragments thereof, for example, SEQ ID NO: 1, glucose-6-phosphate-1-dehydrogenase, SEQ ID NO: 225, D-ribulose-5-phosphate-3-epimerase; and SEQ ID NO: 619 to encode phosphoglucoisomerase. *See, e.g.,* specification at page 14, line 2 through page 15, line 2, page 222, line 8 through page 223, line 13 (Example 4), Table A and the sequence listing. The specification also explains the interrelationship of the respective enzymes involved in the phosphogluconate pathway (*see, e.g.,* specification at page 1, line 17 through page 4, line 20). In addition, the specification also discloses the methods used to analyze each of the claimed nucleic acid molecules and its association with the phosphogluconate pathway. *See, e.g.,* specification at page 15, line 21 through page 20, line 4 and Table A. One of ordinary skill in the art would recognize that the claimed nucleic acid molecules have utility, for example, to encode the respective maize or soybean phosphogluconate pathway enzymes upon reading the present

specification. These utilities are immediately apparent for the claimed nucleic acid molecules without further research.

The Examiner argues that "[f]or the nucleic acid to have utility based on a putatively encoded peptide, the identity and activity of the peptide must be known or established." Final Action at page 3. However, the Examiner provides no support for such an assertion. Moreover, as discussed above, the specification discloses that the claimed nucleic acid molecules encode proteins with significant sequence homology to recited enzymes involved in the phosphogluconate pathway. *See, e.g.*, specification at page 224, *et seq.* (Table A). The specification also discloses that the functions of phosphogluconate pathway enzymes are well-known in the art. *See, e.g.* specification at page 1, line 18 through page 4, line 20. These uses give a firm indication of the precise uses to which the claimed nucleic acid molecules can be put. *See, e.g. In re Fisher*, slip op. at 21.

The Examiner alleges that "[u]sing sound scientific reasoning and absent any information with regard to homology between conserved regions, catalytic domains, etc., one skilled in the art of either molecular biology or biochemistry would reasonably doubt that a PUTATIVELY encoded polypeptide would, in fact, have the same activity as a protein which it exhibits only 58% homology." Final Action at pages 3-4. As set forth in the specification, the claimed nucleic acid molecules are shown to have similarity to sequences that encode phosphogluconate pathway enzymes. *See, e.g.*, Specification at page 222, line 9, *et seq.* and Table A. As such, the claimed nucleic acid molecules are structurally correlated with polypeptides having known utilities.

The Examiner also maintains that the claimed nucleic acid molecules lack utility apparently because one would allegedly not be able to recognize an appropriate ATG codon or

ORF for the claimed nucleic acid molecules. *See* Final Action at page 4. However, as stated above, one of ordinary skill on the art would clearly be able to ascertain these elements based on Applicants' disclosure (*see, e.g.,* specification at page 149, lines 16-18) and tools available to practitioners in the art, *e.g.,* BLASTX. As Dr. Vosnidou's Declaration establishes, using such tools, SEQ ID NO: 1 was identified as having 95% identity to a *Zea mays* clone similar to glucose-6-phosphate dehydrogenase without first identifying an ATG codon. *See* Vosnidou Decl. at ¶¶ 3-4. Moreover, the specification discloses that the nucleic acid molecules of the present invention encode phosphogluconate pathway enzymes or fragments thereof. Therefore, an ORF or start codon is not necessary for the claimed nucleic acid molecules.

An examiner must accept a utility by an applicant unless the Office has evidence or sound scientific reasoning to rebut the assertion. *See In re Oetiker*, 977 F.2d 1443, 1445, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992). "More specifically, when a patent application claiming a nucleic acid asserts a specific, substantial, and credible utility, and bases the assertion upon homology to existing nucleic acids or proteins having an accepted utility, the asserted utility must be accepted by the examiner unless the Office has sufficient evidence or sound scientific reasoning to rebut such as assertion." Federal Register 66(4):1096, Utility Guidelines (2001). "[A] 'rigorous correlation' need not be shown in order to establish practical utility; 'reasonable correlation' is sufficient." *See, Fujikawa v. Wattanasin*, 93 F.3d 1559, 1565, 39 U.S.P.Q.2d 1895, 1900 (Fed. Cir. 1996). "An Applicant can establish this reasonable correlation by relying on statistically relevant data documenting the activity of the compound or composition, arguments or reasoning, documentary evidence, or any combination thereof." M.P.E.P. § 2107.03, at page 2100-43. Applicants have demonstrated such a reasonable correlation.

The claimed nucleic acid molecules are disclosed as encoding maize or soybean phosphogluconate pathway enzymes or fragments thereof. The specification provides ample correlation between the claimed nucleic acid molecules and phosphogluconate pathway proteins. Accordingly, the assertion of the use of the claimed nucleic acid molecules to encode phosphogluconate pathway enzymes or fragments thereof satisfies the utility requirement of 35 U.S.C. § 101.

The Examiner has not provided any support for the proposition that the claimed nucleic acid molecules would not work for the recited utilities; or that one skilled in the art would doubt that the claimed nucleic acid molecules would work for the utilities disclosed in the present specification. To the contrary, the Examiner has acknowledged that "[i]t is possible that a claimed SEQ ID NO: encodes a fragment of an enzyme." Office Action at page 3. Applicants have thus provided sufficient evidence to lead a person of ordinary skill in the art to conclude that the asserted utilities are more likely than not true.

Applicants have disclosed a specific, substantial and credible utility for the claimed nucleic acid molecules. Any one of these utilities is enough to satisfy the requirements of 35 U.S.C. § 101. Because Applicants need only establish a single utility to satisfy 35 U.S.C. § 101, and have done so in the present case, the rejection under Section 101 is incorrect. Reconsideration and withdrawal of this rejection are respectfully requested.

III. Rejection under 35 U.S.C. § 112, first paragraph, Enablement

Claims 1, 11-13, 15-22, 24, and 27-31 stand rejected under 35 U.S.C. § 112, first paragraph as not enabled because the claimed invention allegedly lacks utility. Final Action at

page 5. Applicants respectfully traverse this rejection and contend that this rejection has been overcome by the arguments set forth above regarding utility. Thus, the enablement rejection under 35 U.S.C. § 112, first paragraph is improper. Applicants respectfully request reconsideration and withdrawal of this ground of rejection.

Claims 1, 22, 24 and 28 also stand rejected under 35 U.S.C. § 112, first paragraph, as the claimed subject matter allegedly is "not described in the specification in such a way as to enable one skilled in the art... to make and/or use the invention." Final Action at page 6. Applicants respectfully maintain their traversal this rejection.

The Examiner maintains that "[t]he instant specification does not teach that the claimed nucleic acids are known to encode polypeptides with enzymatic activity." Final Action at page 6. The Examiner also maintains that "none of the claimed nucleic acids appears to be long enough to encode the entirety of any of the enzymes recited in the claims" and that "it is not known whether any encoded fragment of a polypeptide would have enzymatic activity." *Id.*

Applicants respectfully disagree with the Office's assertion that "one of skill in the art would not know how to use the claimed nucleic acids to encode an enzyme." Final Action at page 7. For example, the specification provides a detailed description of the nucleic acid sequences required by the claims, and further describes amino acid sequences derived there from, and constructs and methods of use related thereto. *See, e.g.*, specification at page 46, line 6 through page 52, line 16 (describing polypeptide molecules encoded by the nucleic acid sequences of the present invention, homologues and other modifications, and methods of producing or expressing peptides or fragments of peptides), page 92, line 1 through page 110, line 16 (describing use of the claimed nucleic acid molecules in methods of transforming plants),

page 110, line 17 through page 113, line 4 (describing use of claimed nucleic acid molecules in transformation of plants to reduce the expression of phosphogluconate pathway enzymes). Taken in combination, such disclosure provides adequate direction - including working examples - to teach the skilled artisan how to make and use the claimed invention without undue experimentation.

To the extent that any additional experimentation may be required, Applicants note that the performance of routine and well-known steps cannot create undue experimentation even if it is laborious. *See In re Wands*, 858 F.2d at 737, 8 U.S.P.Q.2d at 1404; *In re. Angstadt,* 537 F.2d 498, 504, 190 U.S.P.Q. 214, 218-219 (C.C.P.A. 1976). Time and difficulty of experiments are not determinative if they are merely routine. M.P.E.P. § 2164.06, page 2100-192. That is, experimentation is not necessarily undue simply because it is complex, if the art typically engages in such experimentation. *See In re Certain Limited-Charge Cell Culture Microcarriers*, 221 U.S.P.Q. 1165, 1174, (Int'l Trade Comm'n 1983) *aff'd. sub nom., Massachusetts Institute of Technology v. A.B. Fortia*, 774 F.2d 1104, 227 U.S.P.Q. 428 (Fed. Cir. 1985).

To the extent that the Office suggests there is a requirement for *a priori* predictability without recourse to any experimentation, that position is without legal support. *Cf. Atlas Powder Co. v. E. I. du Pont de Nemours & Co.*, 750 F.2d 1569, 1576, 224 U.S.P.Q. 409, 413 (Fed. Cir. 1984) ("[t]hat some experimentation is necessary does not preclude enablement"). The proper test of enablement in such a situation is whether the disclosure "adequately guide[s] the art worker to determine, without undue experimentation, which species among all those encompassed by the claimed genus possess the disclosed utility." *See In re Vaeck*, 947 F.2d 488, 496, 20 U.S.P.Q.2d 1438, 1445 (Fed. Cir. 1991).

The Office Action expresses concern that "it is not known whether any encoded fragment of a polypeptide would have enzymatic activity." *See, e.g.,* Final Action at page 6. This concern is misplaced. "It is not a function of the claims to specifically exclude ... possible inoperative substances." *Atlas Powder Co. v. E. I. du Pont de Nemours & Co.*, 750 F.2d 1569, 1576, 224 U.S.P.Q. 409, 413 (Fed. Cir. 1984) (citing *In re Dinh-Nguyen*, 492 F.2d 856, 858-59, 181 U.S.P.Q. 46, 48 (C.C.P.A. 1974)). The case law does not require "each and every compound within a claim to be equally useful for each and every contemplated application." *Ex Parte Cole*, 223 U.S.P.Q. 94, 95 (B.P.A.I. 1983).

There is no legal requirement that each and every nucleic acid molecule encompassed by the claims be useful for every contemplated utility. What is required is that the art worker know how to determine, after reasonable experimentation, whether a particular nucleic acid molecule within the claim is useful for a particular utility. The Office Action has not contended, nor can it contend that this is unachievable with the nucleic acid molecules of the present claims. On the contrary, Applicants submit that based on the teachings of the present specification and the knowledge of those skilled in the art, routine procedures are available to identify nucleic acid molecules, for example, that encode phosphogluconate pathway enzymes. *See, e.g., Specification*, page 1, line 17 through page 4, line 20 and page 46, line 6 through page 52, line 16.

As such, it is submitted that Applicants have provided considerable direction and guidance, and have presented working examples such that it is well within the level of ordinary skill in the art to practice the invention without undue experimentation. The Examiner has not provided sufficient evidence to cast doubt on the guidance provided in the specification.

Accordingly, for at least these reasons, it is submitted that the claims are sufficiently enabled under 35 U.S.C. § 112, first paragraph, and withdrawal of this rejection is respectfully requested.

IV. Rejection under 35 U.S.C. § 112, first paragraph, Written Description

Claims 1, 22, 24, and 28 are again rejected under 35 U.S.C. § 112, first paragraph because the claimed subject matter allegedly was "not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention." Final Action at page 7. Applicants respectfully traverse this rejection.

Applicants acknowledge and thank the Examiner for indicating that "the rejection under 35 USC 112 for lack of written description is hereby withdrawn with regard to claims 11-13, 15-21, 27 and 29-30." *Id.*

The Examiner, acknowledging that "[t]he specification discloses SEQ ID NOs 1, 4, 14, 27, 225, 298, 311, 356, 569, and 619 which putatively encode various phosphogluconate pathway enzymes," does not dispute that Applicants had possession of and have adequately described the claimed SEQ ID NOs. *Id.* However, the Examiner argues that "[a]s the sequences recited in the claims are apparently fragments which do not appear to comprise ORF's or actually encode any known proteins, a nucleic acid 'comprising' the fragments encompasses much larger sequences which may encode entirely different proteins with entirely different activities from those of the recited enzymes." *Id.* At pages 7-8.

Applicants reiterate that the purpose of the written description requirement is to ensure that the inventors had possession of the claimed subject matter, *i.e.*, to ensure that the inventors actually invented what is claimed. *Gentry Gallery Inc. v. Berkline Corp.*, 134 F.3d 1473, 1479, 45 U.S.P.Q.2d 1498, 1503 (Fed. Cir. 1998); *Lockwood v. American Airlines*, 107 F.3d 1565, 1572, 41 U.S.P.Q.2d 1961, 1966 (Fed. Cir. 1997); *In re Alton*, 76 F.3d 1168, 1172, 37 U.S.P.Q.2d 1578, 1581 (Fed. Cir. 1996). If a person of ordinary skill in the art would, after reading the specification, understand that the inventors had possession of the claimed invention, even if not every nuance, then the written description has been met. *In re Alton*, 76 F.3d at 1175, 37 U.S.P.Q.2d at 1584. A person of ordinary skill in the art would, after reading the present specification, understand that Applicants had possession of SEQ ID NOs: 1, 4, 14, 27, 225, 298, 311, 569, and 619, complements, as well as the enzymes, or fragments thereof, they encode. Applicants have indeed demonstrated possession of the claimed invention.

For example, the specification describes gene sequences, corresponding sequences from other species, mutated sequences, SNPs, polymorphic sequences, promoter sequences, exogenous sequences, and so forth (*see, e.g.,* specification at page 23, line 12 through page 26, line 20; page 46, line 6 through page 48, line 5; page 53, line 10 through page 54, line 22; and page 65, line 21 through page 74, line 18). The specification also describes appropriate hybridization conditions (*see, e.g.,* specification at 43, line 13 through page 45, line 4); nucleic acid molecules comprising nucleic acid sequences having conservative variations or encoding amino acid sequences having conservative substitutions (*see, e.g.,* specification at page 48, line 6 through page 50, line 6); fusion protein or peptide molecules or fragments thereof encoded by the nucleic acid molecules of the present invention (*see, e.g.,* specification at page 59, lines 4-15); plant homo-

logue proteins (*see, e.g.,* specification at page 59, line 16 through page 60, line 6); site directed mutagenesis of the claimed nucleic acid molecules (*see, e.g.,* specification at page 87, line 12 through page 89, line 3); vectors comprising the claimed nucleic acid molecules and methods of transforming plants (*see, e.g.,* specification 93, line 1 through page 107, line 19); and construction of cDNA libraries using the claimed nucleic acid molecules (*see, e.g.,* specification at page 152, line 13 through page 222, line 7 (Examples 1-3)).

Thus, Applicants respectfully disagree with the Examiner's contention that despite the numerous variations of the claimed nucleic acid molecules described in the present specification, "does not describe nor show possession of the claimed invention of at least claims 1, 22, 24, and 28". Final Action at page 8. The Examiner appears to assert that each nucleic acid molecule within a claimed genus must be described by its complete structure. This assertion is unfounded. The test, promulgated by the Federal Circuit, stipulates that where a genus of nucleic acids may be described by a structural feature that distinguishes members of the claimed genus from non-members of the claimed genus, written description is satisfied. *See Regents of the University of California v. Eli Lilly and Co.*, 119 F.3d 1559, 1568-69, 43 U.S.P.Q.2d 1398, 1406 (Fed. Cir. 1997). In the present case, Applicants have satisfied that test for written description by providing a structural feature, namely nucleic acid molecules that distinguish members of the claimed genera from non-members.

Applicants maintain that they have provided a representative number of detailed chemical structures, i.e., the nucleic acid molecules encoding the recited maize or soybean phosphogluconate pathway enzymes, where the nucleic acid molecule comprises a nucleic acid sequence of SEQ ID NOs: 1, 4, 14, 27, 225, 298, 311, 569, and 619, and their complements. The

common structural feature (the nucleotide sequence of SEQ ID NOs: 1, 4, 14, 27, 225, 298, 311, 569, 619 and their complements) is shared by every nucleic acid molecule in the claimed genera, and this feature distinguishes members of the claimed genera from non-members. For example, if a nucleic acid molecule such as an mRNA contains the nucleotide sequence of SEQ ID NO: 1, then it is a member of the claimed genus of nucleic acid molecules comprising a nucleic acid sequence of SEQ ID NO: 1.[1] If a nucleic acid molecule does not contain SEQ ID NO: 1, then it is not a member of that claimed genus. The presence of other nucleotides at either end of the recited sequence will not interfere with the recognition of a claimed nucleic acid molecule as such – it either contains the nucleotides of SEQ ID NO: 1 or it does not. Accordingly, the standard elucidated in *Lilly* for the written description requirement has been met.

Furthermore, nucleic acid molecules within the scope of the instant claims are also readily identifiable as they either encode a maize or soybean phosphogluconate pathway enzyme or fragment thereof or they do not. Claims 1, 22, 24, and 28 are directed to "substantially purified nucleic acid molecules that encode a maize or soybean" phosphogluconate pathway enzyme or fragment thereof. Applicants respectfully maintain that the present specification complies with the written description requirement by describing nucleic acid sequences that encode maize or soybean phosphogluconate pathway enzymes or fragments thereof. *See, e.g.*, Table A. Descriptions of ORFs are not required to comply with the written description requirement.

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[1] The same argument applies with equal force to every genus of the claimed nucleic acid molecules. For example, if a nucleic acid molecule such as an mRNA comprises the nucleotide sequence of SEQ ID NO: 4, then it is a member of the claimed genus of nucleic acid molecules comprising a nucleic acid sequence of SEQ ID NO: 4. *See, e.g.*, claim 13.

The fundamental factual inquiry for satisfying the written description requirement is whether the specification conveys with reasonable clarity to those skilled in the art that, as of the filing date sought, that applicants were in possession of the invention as now claimed. See, *e.g.*, *Vas-Cath, Inc. v. Mahurkar*, 935 F.2d 1555, 1563-64, 19 U.S.P.Q.2d 1111, 1117 (Fed. Cir. 1991). An applicant shows possession of the claimed invention by describing the claimed invention with all of its limitations. *Lockwood v. American Airlines, Inc.*, 107 F.3d 1565, 1572, 41 U.S.P.Q.2d 1961, 1966 (Fed. Cir. 1997), M.P.E.P. § 2163.02. Moreover, the Examiner has failed to provide reasons why a person skilled in the art at the time the application was filed would not have recognized that Applicants were in possession of the invention as claimed in view of the disclosure of the application as filed. "A general allegation of 'unpredictability in the art' is not a sufficient reason to support a rejection for lack of adequate written description." MPEP § 2163 at 2100-170.

For these same reasons, the Examiner's rejection of claims 1, 22, 24 and 28 for lack of adequate written description, *see* Office Action at page 11, must also fail as it too overreaches the requirements of the law. Simply put, Applicants have described the invention encompassed by the claims. No more is required.

The Examiner has offered no evidence to demonstrate, in light of Applicants' disclosure, why one of ordinary skill in the art would reasonably doubt that the invention encompassed by Applicants' has not been adequately described in the present disclosure. As such, the Examiner has not met the burden to impose a written description rejection.

Based on the foregoing, Applicants respectfully submit that the currently pending claims are supported by an adequate written description pursuant to the requirements of 35 U.S.C. §

112. As such, reconsideration and withdrawal of the outstanding written description rejection are respectfully requested.

V. Non-Statutory Double Patenting Rejections

Claims 1, 11, 16, 29, and 31 stand provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 10/425,114 (the '114 Application) allegedly because SEQ ID NO: 28,690 of the '114 application is identical to SEQ ID NO: 225. Applicants note that SEQ ID NO: 62284 was elected for prosecution in the '114 application in a response to restriction requirement dated January 6, 2006. As such, Applicants submit that claim 1 of the '114 application does not encompass the subject matter of claims 1, 11, 16, 29, and 31 of the present application. As such, Applicants respectfully request reconsideration and withdrawal of the provisional rejection of claims 1, 11, 16, 29, and 31 under the judicially created doctrine of obviousness-type double patenting.

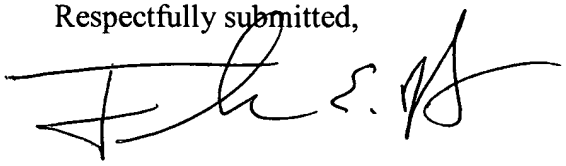
Claims 1, 11, 16, 29, and 31 stand provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 10/425,115 (the '115 Application) allegedly because SEQ ID NO: 155,395 of the '115 application is identical to SEQ ID NO: 225. Applicants note that SEQ ID NO: 36848 was elected for prosecution in the '115 application in a response to restriction requirement dated March 2, 2006. As such, Applicants submit that claim 1 of the '115 application does not encompass the subject matter of claims 1, 11, 16, 29, and 31 of the present application. As such, Applicants respectfully request reconsideration and withdrawal of the provisional rejection of

claims 1, 11, 16, 29, and 31 under the judicially created doctrine of obviousness-type double patenting.

Conclusion

In view of the foregoing remarks, Applicants respectfully submit that the present application is now in condition for allowance, and notice of such is respectfully requested. The Examiner is encouraged to contact the undersigned should any additional information be necessary for allowance.

Respectfully submitted,



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